

REF. W/O 130327 COSTED.

Work Order ID 162949

162949

Page 1

Wednesday, August 16, 2017 9:17:13 AM

Item ID: 647.2201

Revision ID:

Item Name: Cross Assembly

Start Date: 6/16/2017 Start Qty: 4.00

Required Date: 7/20/2017 Req'd Qty: 4.00

Reference:

Approvals:

Process Plan: *AD*

Date: AUG 16 2017

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

647.2200

N/C

100

0.00

100

Bandsaw

BAND SAW

Memo

0.71

Jeaspa Bandsaw

Cut Blank at 16.400"

110

0.00

110

HAAS 5AXIS

Memo

0.00

HAAS CNC vertical machine #5

1-Machine per folio FB371

DWG REV: _____

FOLIO REV: _____

2- Deburr and break all sharp edges

see w/o 130327

Work Order ID 162949

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Page 2

Item ID: 647.2201 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Cross Assembly
Start Date: 6/16/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 7/20/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start ***NR1***
QC: Date: SPC (Y/N): Date: Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC1- Inspection performed by CMM Memo Inspect on CMM as per folio CMMA001. DWG REV: _____ CMM PROG. REV: _____	0.00 0.00				_____	_____	_____	_____
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00				_____	_____	_____	_____

See w/o 130327

Work Order ID 162949

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Item ID: 647.2201 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Cross Assembly
Start Date: 6/16/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 7/20/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
140						DAS			
Outsource4	Memo	0.00				13		AUG 16 2017	4
Outsource process - Anodize	Issue P/O to ATG: 36731					9-89			
	AS PER MPP-172 SECTION 2.1, HARD ANODIZE COLOR BLACK, PER IAW MIL-A-8625 TYPE 3 CLASS 2 AS PER MPP-172 SECTION 4.2, PRIME AS PER IAW MIL-PRF-23377 TYPE 1 CLASS N Certification of Conformity is required								
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150									
Packaging	Memo	0.00							
Packaging									

4 **DAS**
6
9-89 **AUG 21 2017**

Work Order ID 162949

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162949

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Item ID: 647.2201 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Cross Assembly
Start Date: 6/16/2017 Start Qty: 4.00 ***4*** Cust Item ID:
Required Date: 7/20/2017 Req'd Qty: 4.00 ***4*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 *160* SprayPaint Spray Painting	Spray Painting per QSI005 4.2 Memo PRIME AS PER DWG, SEE NOTE #2 CARDINAL 4860-50 PRIMER BATCH: _____	0.00 DA6 38 9-89 0.00							
170 *170* QC Quality Control	QC14- Inspect Spray Paint Memo	0.00 DA6 38 9-89 0.00							
180 *180* Packaging Packaging	Identify as per dwg & Stock Location: CCK079 Memo ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***	0.00 0.00							

4 AUG 21 2017

Work Order ID 162949

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Item ID: 647.2201**Accept*****N900040100*****Setup Start *NS1*****Revision ID:****Stop *NS2*****Item Name:** Cross Assembly**Start Date:** 6/16/2017 **Start Qty:** 4.00***4*****Cust Item ID:****Required Date:** 7/20/2017 **Req'd Qty:** 4.00***4*****Customer:****Reference:****Approvals:** **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____**Run Start *NR1*****QC:** _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____**Stop *NR2*****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

UM 17/8/21

DAS
21
8-89

Picklist Print

Page 1

Wednesday, August 16, 2017 9:17:19 AM

Work Order ID: 162949

162949

Parent Item: 647.2201

647 2201

Parent Item Name: Cross Assembly

Start Date: 6/16/2017

Required Date: 7/20/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE 12-10-22 JLM VERIFIED BY:DD
B Now machined in house JFS 15/03/02 Verified by:JLM

IPP Rev:

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B2.250X02.75 0		Purchased	No			100	f	24.0000	1.367	5.755789			

M7075T6B2 250X02 750
7075-T6 BAR 2.250" X 2.750"

M 126615.

**

Location	Loc Qty	Loc Code
MAT006	24	
m126390	24	

MS21209F1-10

Purchased

No

156

Each

59.0000

6

24

MS21209F1-10
HELI COIL

**

Location	Loc Qty	Loc Code
ST297	59	
m132344	9	
m137951	50	

12/08/18
DAS
36
9-89

7
17

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 02678				SHEET 1 OF 1	
	DWG NO. 647.2200	REV: N/C	PREPARED BY R. ROSANO	DATE: 09/01/10	EFFECT ON DWG ☐ INC. ☒ UNINC.	
	DWG TITLE: CROSS ASSY					
	APPROVED BY: ENGR <i>[Signature]</i>	MFG <i>[Signature]</i>	QC <i>[Signature]</i>	EFF: CURRENT ORDER		
TRANSACTION CODES (TC): A-ADD C-CREATE R-REVISE D-DELETE	REASON: ADDED DELTA NOTE 6, LOCATE SPECIFIC HOLES FOR HELICAL INSERT					

SHEET 1, A1 IS:

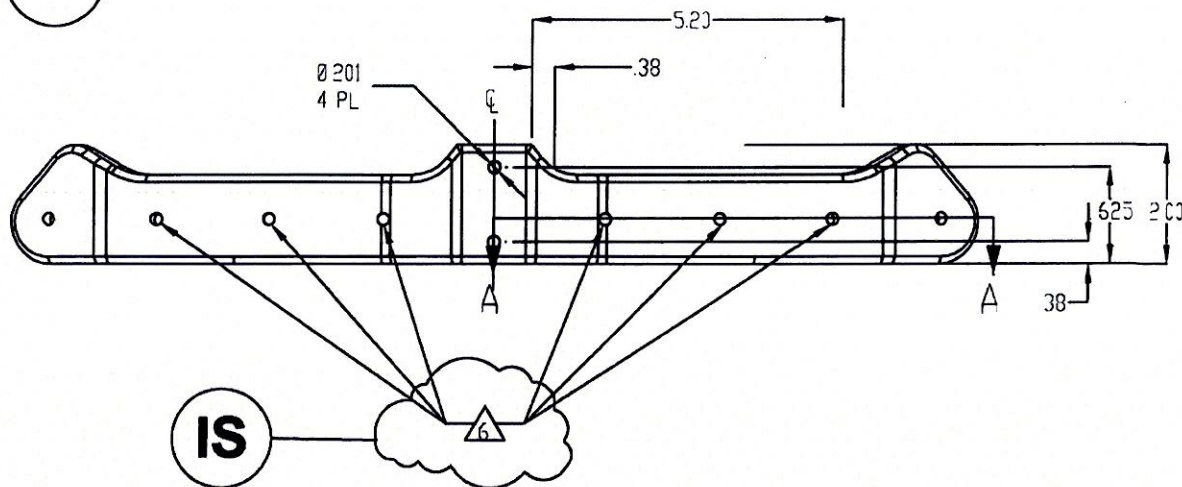
NOTES:

- MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N
- PART DIMENSIONS CONTROLLED BY CAD MODEL
F/N 1 FILE NAME: 647.2210 REV PR1 CROSS LAST MODIFIED 06/09/09
- DEBURR AND BREAK ALL SHARP EDGES
- IDENTIFY IAW MPR-120
- INSTALL F/N 2, HELICAL INSERTS, AFTER ANODIZING. TAP FOR #10-32
HELICAL INSERT = 1.0" DIA. 6 PL.

IS

SHEET 3, B4 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 162949 ID
AUG 16 2017



IS

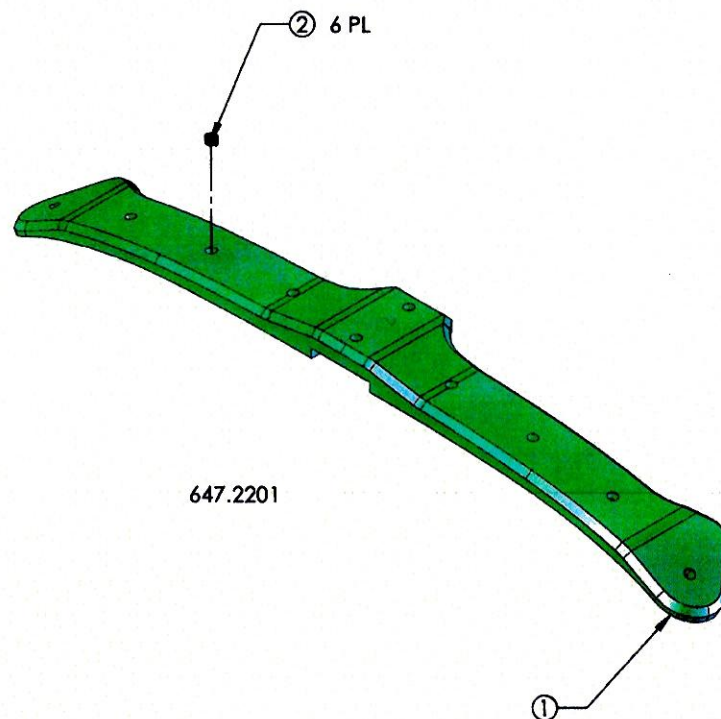
2	R	601.0987	6	HELICAL INSERT	MS21209F110	6
F/N	TC	PART NUMBER	2201	DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:				CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ MDL ☐ INSTALL INSTRUC ☐ ICA ☐ BOM				☐ MAJOR ☒ MINOR	☐ YES ☒ NO	

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION: PR1		N/C
N/C	INITIAL RELEASE	06/09/09	P. BRAVO

NOTES:

- 1 MATERIAL: ALUMINUM 7075-T651 PER AMS-QQ-A-250/12
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK;
CARDINAL 4860-50 PRETREATMENT PRIMER
PRIME IAW MIL-P-23377J TYPE I CLASS N
- 3 PART DIMENSIONS CONTROLLED BY CAD MODEL
F/N 1 FILE NAME: 647.2210 REV PR1 CROSS LAST MODIFIED 06/09/09
4. DEBURR AND BREAK ALL SHARP EDGES
5. IDENTIFY IAW MPP-120

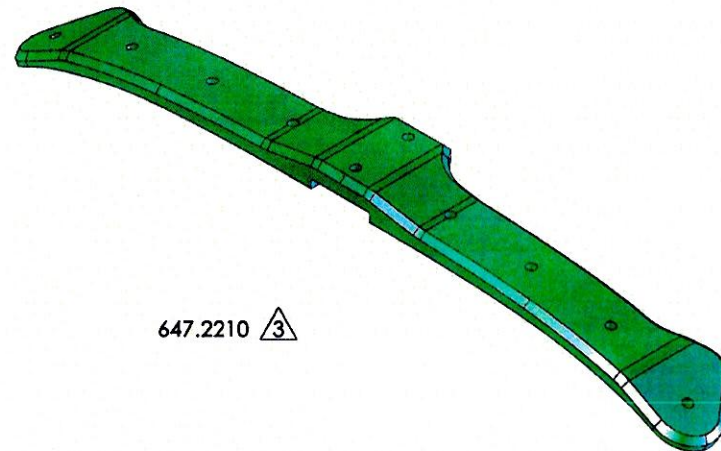


UNINCORPORATED ECN(s)

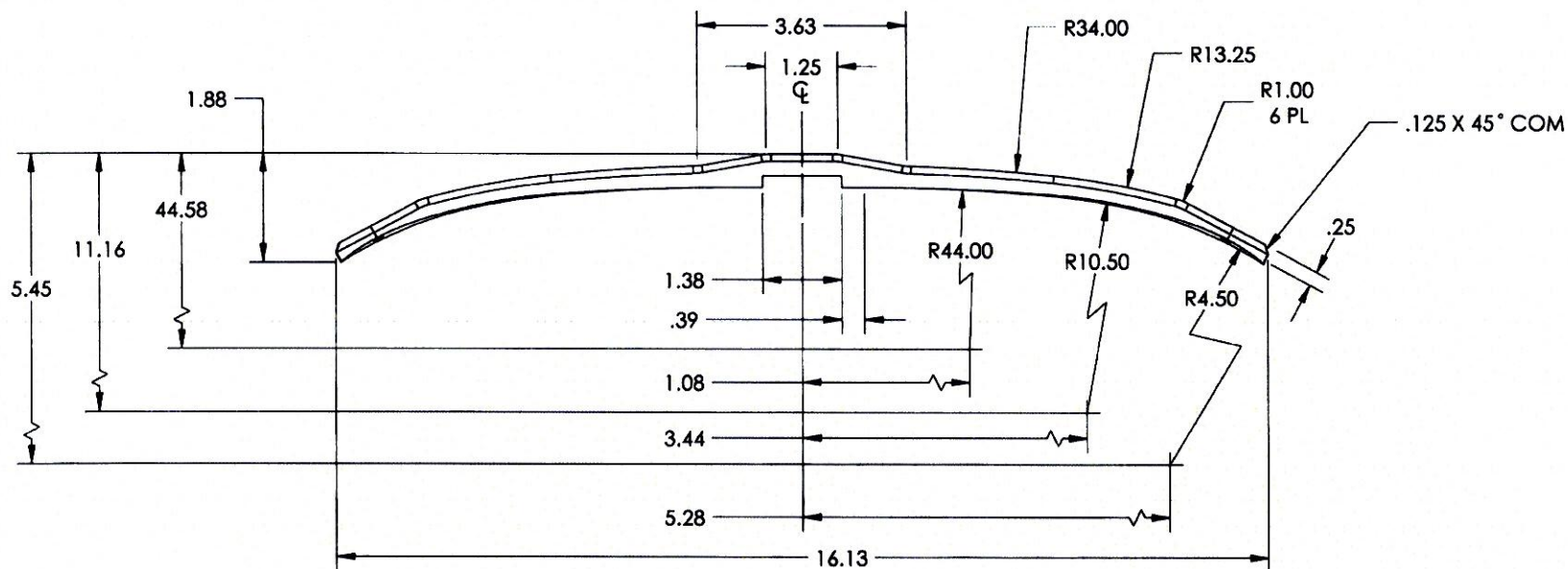
02498,

6	2	601.0987	HELICAL INSERT	MS21209F110	
1	1	647.2210	CROSS		
		647.2201	CROSS ASSY		
2201	FIND #	PART #	DESCRIPTION	MATL	SPEC.
QTY			PARTS LIST		
NEXT ASSY (S)			APICAL INDUSTRIES		
647.1300			2608 TEMPLE HEIGHTS DR.		
			OCEANSIDE, CA. 92056-3512 (760)724-5300		
			CROSS ASSY		
			SEE CAGE CODE	DMC NO	REV
			B 07M26	647.2200	N/C
			SCALE NONE		
			SHEET 1 OF 3		

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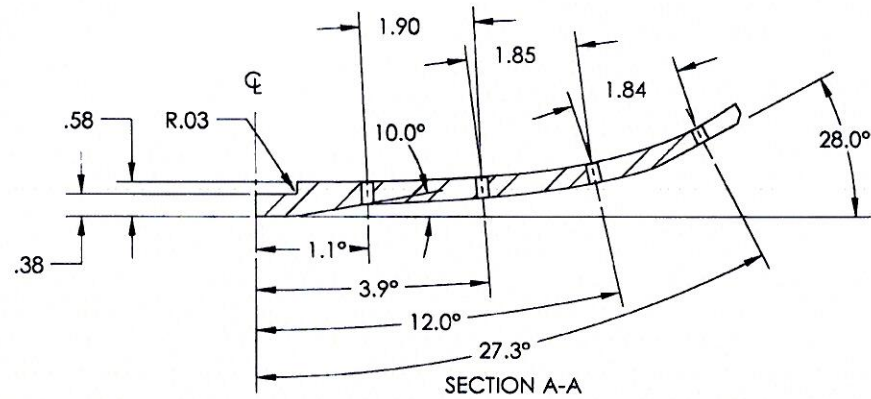
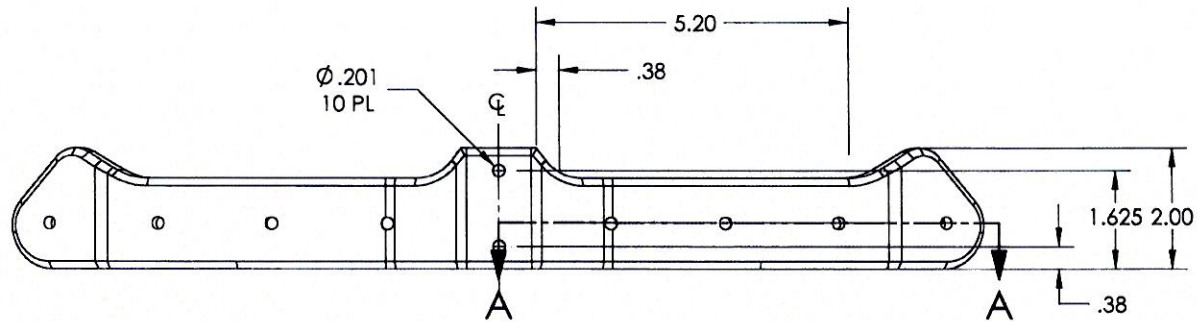


647.2210 $\triangle 3$



APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CROSS ASSY	
ORIGINAL DATE: 02-01-97 DRAWN BY: J. GARDNER CHECKED BY: P. BRAVO DRAWING APPROVAL: P. BRAVO CONTRACT NO.:	SITE: B CAGE CODE: 07H26 DWG. NO.: 647.2200 SCALE: NONE
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± 5°	REV: N/C SHEET: 2 OF 3

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ORIGINAL DATE 10/01/97 05:00:00		APICAL INDUSTRIES	
DRAWN BY J. GARDNER		2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY P. BRAVO		CROSS ASSY	
DRAWING APPROVAL P. BRAVO		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ± .01 3 PLACE DECIMALS ± .005 ANGLES ± .5°	
CONTRACT NO.		SIZE B	REV N/C
		CAGE CODE 07M26	DWG NO 647.2200
		SCALE: NONE	SHEET 3 OF 3



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 913569

Date: 21-Jul-17

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Chantal Lavoie
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
15 ea	Part: 646.9910 Struts Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 21252	Rev: N/C	PO: PO36731 Line: 29
4 ea	Part: 647.2201 Cross Assembly Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Job: 21256	Rev: N/C	PO: PO36731 Line: 33
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: _____ Certified Signature: _____ Receiver Signature: <u>Chantal Lavoie</u> A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt. Made in Canada.			